





Residual current devices



	■ RCCB	24
	■ electrical auxiliaries for RCCB	26
	■ 100/125 A RCCB	28
	■ Vigi C60 module	29

instantaneous RCCB, selective RCCB

30 mA to 300 mA instantaneous

300 mA **S** selective and "si"

IEC 61008 - EN 61008 - BS EN61008

functions

Residual current circuit-breakers combine the following functions:

- control
- automatic circuit breaking in the event of an insulation fault between phase and earth greater than or equal to 30, 100 or 300 mA.

Residual current circuit-breakers are used in the residential, service and industrial sectors.

The residual current release is electromechanical and operates without any auxiliary source of supply.

description

common technical data

- power circuit:
 - voltage rating:
 - 240 to 415 V AC, +10, -20 %, 50 Hz
 - current rating: 40 to 100 A
 - disconnection with positive contact indication
 - reinforced short-circuit current withstand
 - number of operating cycles (O-C): 20 000
 - release:
 - instantaneous or selective release:
 - fixed sensitivities for all ratings
 - manual control: handle
 - indication:
 - mechanical: the earth leakage fault is displayed on the front face by mechanical indicator
 - electrical: using the SD indicating auxiliary switch (supplied separately)
 - environment:
 - tropicalisation: treatment 2 (relative humidity 95% at 55 °C)
 - weight (g)
- | type | 2P | 4P |
|------|-----|-----|
| | 230 | 380 |
- connection
 - tunnel terminals for 35 mm² supple cables or 50 mm² rigid cables
 - compliance with standards: IEC 61008 and EN 61008

specific data

instantaneous RCCB

- instantaneous release
- provides protection against nuisance tripping due to transient overvoltage (stroke of lightning, switchgear switching on the network, etc.).
- Level of immunity: 250 A peak according to 8/20 μs periodical wave

selective RCCB **S**

- selective release allowing total vertical discrimination where the 30 mA RCDs are placed downstream
- provides protection against nuisance tripping due to transient overvoltage (stroke of lightning, switchgear switching on the network, etc.).
- Level of immunity: 250 A peak according to 8/20 μs periodical wave

type "si"

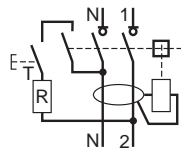
- the "si" range was designed to maintain a network with optimum safety and service continuity in installations disturbed:
- by extreme atmospheric conditions
 - by harmonic generating loads
 - by transient switching currents
 - the "si" residual current circuit-breakers are used in the tertiary sector and industry alike
 - in the presence of equipment containing rectifying devices (diodes, thyristors, triacs), a class A instantaneous residual current circuit-breaker should be used which guarantees tripping if a direct component is detected
 - 8/20 μs current wave withstand:
 - 3 kA: Δn ≤ 30 mA
 - 5 kA: Δn > 30 mA

catalogue numbers



16204

type	voltage (V AC)	rating (A)	sensitivity (mA)	catalogue number	width in mod. of 9 mm
AC class RCCB residual current circuit-breakers					
2P	240	25	30	16201	4
			300	16202	4
		40	30	16204	4
			100	16205	4
			300	16206	4
		63	30	16208	4
			100	16209	4
			300	16210	4
		80	30	16212	4
			100	16213	4
			300	16214	4
		100	100	16217	4



catalogue numbers

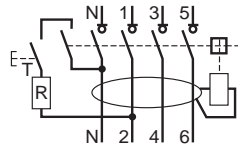


16256

type	voltage (V AC)	rating (A)	sensitivity (mA)	catalogue number	width in mod. of 9 mm
------	-------------------	---------------	---------------------	---------------------	-----------------------------

AC class RCCB residual current circuit-breakers (continued)

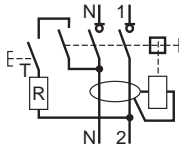
type	voltage (V AC)	rating (A)	sensitivity (mA)	catalogue number	width in mod. of 9 mm
4P	415	25	30	16251	8
			300	16252	8
		40	30	16254	8
			100	16255	8
		63	30	16256	8
			100	16258	8
			300	16259	8
			300 [S]	16260	8
		80	30	16265	8
			300	16261	8
			300 [S]	16263	8



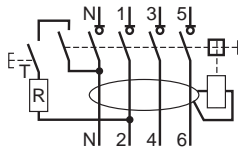
16240

A class RCCB "si" residual current circuit-breakers

type	voltage (V AC)	rating (A)	sensitivity (mA)	catalogue number	width in mod. of 9 mm
2P	240	25	30	16234	4
			30	16237	4
		63	30	16240	4
			300 [S]	16246	4



type	voltage (V AC)	rating (A)	sensitivity (mA)	catalogue number	width in mod. of 9 mm
4P	240	25	30	16321	8
			30	16324	8
		63	30	16327	8
			300 [S]	16334	8



additional information

electrical auxiliaries: page 26
dimensions: page 86

electrical auxiliaries for RCCB

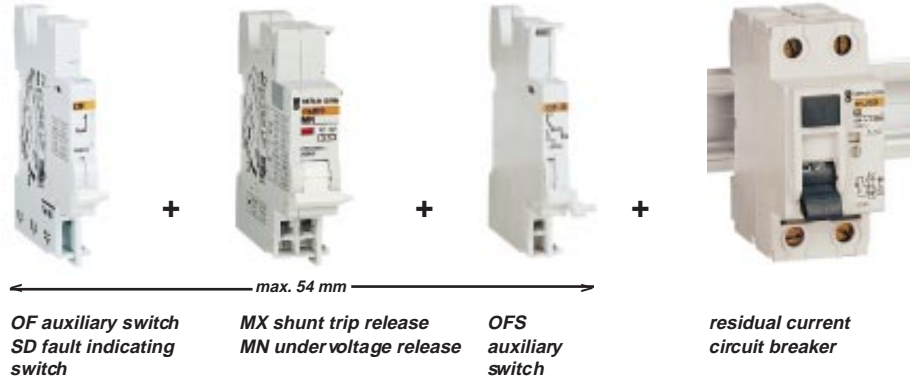
functions

These electrical auxiliaries are used for remote indication or tripping of the residual current circuit breakers.

description

auxiliary combinations

They are mounted on the lefthand side of the residual current circuit breaker within a 54 mm width.



remote tripping

An MX or MN release can be used for this purpose. Tripping is shown by a red indicator on the front face.

MX + OF shunt trip release

trips and opens its associated circuit-breaker when energised:

- equipped with a self-breaking switch
- equipped with a switch (terminals 12 and 14) to indicate whether the circuit-breaker is "open" or "closed" when the coil is energised.

MN undervoltage release

trips and opens its associated circuit-breaker when the supply voltage drops (between 70 and 35%) and prevents reclosing until the supply voltage is restored:

- complies with standards IEC 6947-2
- use:
 - push button emergency stop
 - safety on the supply circuits of several machines by disabling "uncontrolled" restart of all motors.

MN time delayed undervoltage release S

This undervoltage release controls the opening of its associated residual current switch. It allows a 0.2 second time delay on short supply interruptions or voltage drops

characteristics

- consumption of releases

type	voltage		consumption (W or VA)	
	(V AC or DC)		(W)	(VA)
MX	415 V	AC	inrush	120
	220...240 V	AC	inrush	50
	110...130 V	AC	inrush	200
		DC	inrush	10
	48 V	AC	inrush	22
		DC	inrush	22
24 V	AC	inrush	120	
	DC	inrush	120	
MN	220...240 V	AC	hold	4.1
	48 V	AC	hold	4.3
		DC	hold	2.0
MN S	220...240 V	AC	hold	4.1

remote indication

OFS switch

- use of the OFS switch is compulsory for adding the MN, MX, SD and OF functions.
- fixed on the lefthand side of the residual current switch, it indicates whether the switch is "open" or "closed".

OF switch

- fixed on the lefthand side of the residual current switch, it indicates whether the switch is "open" or "closed".

SD fault indicating switch

- this auxiliary switch installed to the left of the circuit-breaker indicates the "tripped on fault" position of the circuit-breaker.
- visualisation of the fault on the front panel by mechanical indicator lamp.

characteristics

- breaking capacity of the auxiliary switches

voltage (V AC or DC)	breaking capacity (A)	
	AC	DC
415 V	3	
≤ 240 V	6	
130 V	1	
≤ 48 V	2	
≤ 24 V	6	

common auxiliary characteristics

- connection by pad terminals for 2 cables 1.5 mm² or 1 cable 2.5 mm².

operation simulation

A test button on the front face of the OF switches is used to simulate the OF functions without using the residual current circuit breaker.

catalogue numbers

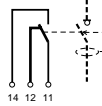
type	control voltage (V AC)	(V DC)
------	---------------------------	--------

catalogue number	width in mod. of 9 mm
---------------------	-----------------------------



26923

OFS auxiliary switch

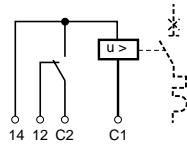


26923	1
-------	---



26946

MX + OF shunt trip release



220...415 24	110...130 24
-----------------	-----------------

26946	2
26948	2



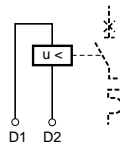
26960

MN undervoltage release

instantaneous

220...240

26960	2
-------	---



delayed

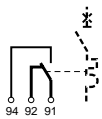
220...240

26963	
-------	--



26927

SD fault indicating switch

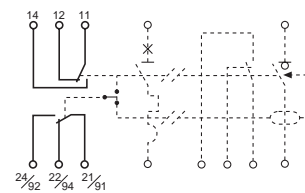


26927	1
-------	---



26929

OF+SD/OF auxiliary contact



26929	1
-------	---

special 100 / 125 A RCCB

30 to 500 mA, AC class

IEC 61008 - EN 61008 - BS EN61008

functions

common functions

- the residual current circuit-breakers combine the following functions:
 - control
 - automatic breaking of a circuit in the event of a phase-to-earth insulation fault
- the 100/125 A ID residual current circuit-breakers are used in the tertiary sector and industry.

specific functions

"instantaneous" type

Ensures instantaneous tripping (without time delay).

AC class

ID for which tripping is ensured by sinusoidal AC residual currents, whether they are suddenly applied or slowly increase.

description

The residual current release is electromagnetic and operates without any auxiliary source of supply.

technical data

- voltage rating: 240...415 V AC
- current rating: 100 or 125 A
- protection against nuisance tripping, 8/20 μ s wave withstand: 30 to 500 mA, 250 A peak
- number of operating cycles (O-C): 10 000
- manual control: handle
- electrical indication: by OFsp indicating auxiliary switch: catalogue number **16940**
- environment:
 - short-circuit withstand: 10 kA with 125 A fuse
 - mechanical withstand: 59 to 80 Hz / 30 mn
 - utilisation temperature: - AC class: -5 °C

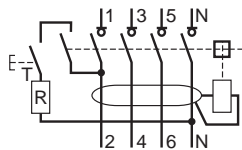
- storage temperature: - AC class: -20 °C to +60 °C
- connection:
 - ID by tunnel terminal for 50 mm² maximum flexible cables
 - auxiliary by 2.5 mm² maximum tunnel terminal
- complies with standards:
 - EN 61008-2.1
 - BS EN 61008
 - IEC 1008.

catalogue numbers



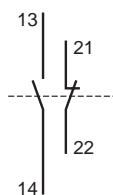
16901

type	rating (A)	voltage (V AC)	sensitivity (mA)	catalogue number	width in mod. of 9 mm
AC class residual current circuit-breakers					
4P	100	240/415	30	16900	10
	100	240/415	100	16901	10
	125	240/415	30	16905	10
	125	240/415	100	16906	10
	125	240/415	300	16907	10
	125	240/415	500	16908	10



16940

type	voltage (V)	current (A)	catalogue number	width in mod. of 9 mm
OFsp auxiliary switch				
	230 V AC	5	16940	1
	230 V DC	0.5		



additional information

dimensions: page 86

Vigi C60 module

instantaneous

IEC 61009 - EN 61009 - BS EN 61009-2-1

description

technical data

Vigi module

- operation:
- electromechanical
- without auxiliary source of supply
- incorporates in the same unit:
- a residual current relay
- a toroid
- total vertical discrimination with the $I\Delta n$ 300 mA "selective" or 1 A "selective" sensitivities, if installed:
- upstream of an instantaneous residual current device
- downstream of an index II time-delayed residual current device, provided that in both cases: $I\Delta n$ of the downstream device $\leq I\Delta n/2$ of the upstream device
- protection against nuisance trippings:
- 8/20 μ s wave withstand;
- AC and A class: 250 A
- "si" type: 3 kA
- [S]: 5 kA
- voltage rating:
- 230...400 V AC -20...+10 %
- frequency: 50...60 Hz
- trip unit:
- instantaneous or selective trip unit: fixed sensitivities for all ratings
- manual control: handle allowing 2 reset modes:
- either reset of the C60 + Vigi module in one single operation
- or reset of the C60 + Vigi module separately. The Vigi module is reset before the circuit-breaker

- mechanical indication: visualisation of the earth fault on the front face by red mechanical indicator on the Vigi module operating handle

■ environment:

- weight (g)

type	2P	3P	4P
Vigi ≤ 25 A	120	180	180
Vigi ≤ 63 A	150	210	210

- connection

- tunnel terminals for 16 mm² flexible cables or 25 mm² rigid cables for Vigi modules with ≤ 25 A ratings

- tunnel terminals for 25 mm² flexible cables or 35 mm² rigid cables for Vigi modules with ≤ 63 A ratings.

- the C60 + Vigi module combination constitutes a residual current device which complies with EN 61009 standards

NB: the Vigi module range with ≤ 25 A ratings is equipped with a locating device to prevent installation risks on circuit-breakers with > 25 A ratings.

screw shield

- single-pole
- sealable

catalogue numbers

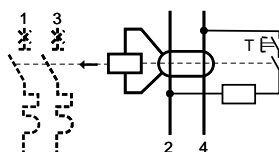
type	rating (A)	sensitivity (mA)	cat. no.	width in mod of 9 mm
------	------------	------------------	----------	----------------------

AC class Vigi C60 module

2P	≤ 25	30	26581	3
		100	26582	3
		300	26583	3
	≤ 63	30	26611	4
		100	26612	4
		300	26613	4



26583



4P	≤ 25	30	26595	6
		100	26596	6
		300	26597	6
	≤ 63	30	26643	7
		100	26644	7
		300	26645	7



26595

